

**IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1           1.       (original) A communication system for transporting Internet protocol-  
2 formatted communications over a Universal Mobile Telecommunications System (UMTS)  
3 wireless communications system, the communication system including a base station and  
4 a radio network controller, the communication system further comprising:

5           an inter-working gateway adapted for interconnection to the radio network  
6 controller and the base station, the inter-working gateway being adapted to communicate  
7 via Internet transport protocols and UMTS-based transport protocols, the inter-working  
8 gateway being further adapted to reformat communications with movable UMTS-based  
9 radio-controlled network layer protocols for transport to the radio network controller and  
10 to reformat communications with movable Internet radio-controlled network layer  
11 protocols for transport to the base station.

1           2.       (original) The communications system as recited in claim 1, wherein the  
2 UMTS communications system exists at an installed site.

1           3.       (original) The communications system as recited in claim 1, wherein the  
2 inter-working gateway is supplied as pre-installed with the transport protocols.

1           4.       (original) The communications system as recited in claim 1, wherein the  
2 inter-working gateway is adapted to receive and download the radio-controlled network  
3 layer protocols and the transport protocols from the base station.

1           5.       (original) The communications system as recited in claim 1, wherein the  
2 base station and the inter-working gateway are interconnected in a local area network.

1           6.       (original) The communications system as recited in claim 1, further  
2 comprising:

3           an SDRAM memory;

4 one or more channel elements, each comprising a digital signal processor and  
5 associated flash memory and an application specific integrated circuit to manage  
6 baseband processing; and

7 a microprocessor for configuring each channel element, storing user data in the  
8 SDRAM memory, and exchanging user data with the digital signal processor.

1 7. (original) The communications system as recited in claim 1, wherein an  
2 interconnection of the inter-working gateway with the base station carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction.

1 8. (original) The communications system as recited in claim 1, wherein an  
2 interconnection of the inter-working gateway with the radio network controller carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction.

1 9. (original) The communications system as recited in claim 1, wherein  
2 an interconnection of the inter-working gateway with the base station carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction, and

6 an interconnection of the inter-working gateway with the radio network controller  
7 carries the communications reformatted with the movable UMTS-based radio-controlled  
8 network layer protocols in a first direction, and the communications formatted with the  
9 movable Internet radio-controlled network layer protocols in a second direction.

1 10. (original) The communications system as recited in claim 1, further  
2 comprising:

3 a Node-B base station adapted for transmitting and receiving cellular telephone  
4 communications, the Node-B base station being interconnected with the radio network  
5 controller for exchanging wireless cellular telephone communications.

1 11. (original) The communications system as recited in claim 10, wherein the  
2 UMTS communications system exists at an installed site.

1           12.     (original) The communications system as recited in claim 10, wherein the  
2 inter-working gateway is supplied as pre-installed with the transport protocols.

1           13.     (original) The communications system as recited in claim 10, wherein the  
2 inter-working gateway is adapted to receive and download the radio-controlled network  
3 layer protocols and the transport protocols from the base station.

1           14.     (original) The communications system as recited in claim 10, wherein the  
2 base station and the inter-working gateway are interconnected in a local area network.

1           15.     (original) The communications system as recited in claim 10, further  
2 comprising:

3                 an SDRAM memory;  
4                 one or more channel elements each comprising, a digital signal processor and  
5 associated flash memory and an application specific integrated circuit to manage  
6 baseband processing; and

7                 a microprocessor for configuring each channel element, storing user data in the  
8 SDRAM memory, exchanging user data with the digital signal processor, and processing  
9 the movable protocols.

1           16.     (original) The communications system as recited in claim 10, wherein an  
2 interconnection of the inter-working gateway with the base station carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction.

1           17.     (original) The communications system as recited in claim 10, wherein an  
2 interconnection of the inter-working gateway with the radio network controller carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction.

1           18.     (original) The communications system as recited in claim 10, wherein  
2                 an interconnection of the inter-working gateway with the base station carries the  
3 communications reformatted with the movable UMTS-based radio-controlled network  
4 layer protocols in a first direction, and the communications reformatted with the movable  
5 Internet radio-controlled network layer protocols in a second direction, and

an interconnection of the inter-working gateway with the radio network controller carries the communications reformatted with the movable UMTS-based radio-controlled network layer protocols in a first direction, and the communications reformatted with the movable Internet radio-controlled network layer protocols in a second direction.

19. (original) An inter-working gateway for wirelessly transporting Internet protocol-formatted communications in a Universal Mobile Telecommunications System (UMTS) communications system, the inter-working gateway comprising:

means for communicating via Internet transport protocols and UMTS-based transport protocols;

means for reformatting communications using movable UMTS-based transport protocols for transport to a radio network controller; and

means for reformatting communications using movable Internet radio-controlled network layer protocols from the radio network controller to the inter-working gateway.

20. (withdrawn) A method for transporting Internet protocol-formatted communications over a Universal Mobile Telecommunications System (UMTS) wireless communications system, the method comprising:

segmenting Internet-formatted communications into Internet framing protocol-protocol data units (FP-PDUs);

multiplexing the FP-PDUs over separate label switched paths via multiple protocol label switching (MPLS); and

exchanging the multiplexed FP-PDUs as formatted multiplexed MPLS data segments between a base station and a radio network controller.

21. (withdrawn) The method as recited in claim 20, further comprising:  
installing radio-controlled network protocols in an inter-working gateway interconnected between the base station and the radio network controller.

22. (withdrawn) The method as recited in claim 20, further comprising:  
segmenting the Internet-formatted communications into FP-PDUs of 350 octets maximum length.

23. (withdrawn) The method as recited in claim 20, further comprising:  
formatting the FP-PDUs with UMTS radio-controlled network layer protocols for transport in the UMTS wireless communications system; and

4            formatting the FP-PDUs with Internet radio-controlled network layer protocols  
5            for transmission as wireless Internet communications.

1            24.     (withdrawn) The method as recited in claim 21, further comprising:  
2            transporting the FP-PDUs formatted with UMTS radio-controlled network layer  
3            protocols from the base station in a first direction; and  
4            transporting the FP-PDUs formatted with Internet radio-controlled network layer  
5            protocols in a second direction.

1            25.     (currently amended) A method for transporting Internet protocol-  
2            formatted communications over a Universal Mobile Telecommunications System (UMTS)  
3            wireless communications system, the UMTS communication system including a base  
4            station and a radio network controller, the ~~communication system~~ method comprising:  
5            reformatting communications using movable UMTS-based radio-controlled  
6            network layer protocols for transport between the base station and the radio network  
7            controller; and  
8            reformatting communications using movable Internet radio-controlled network  
9            layer protocols for transport between the base station and the radio network controller.